

Botulism
Report immediately upon suspicion to Maine CDC - 1-800-821-5821

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Definition

Botulism is a serious, potentially fatal illness. It is caused by a nerve toxin produced by *Clostridium botulinum* bacteria. Botulism is always considered a medical emergency. It can cause death by paralyzing the muscles used to breathe.

Transmission

There are five main kinds of botulism.

- *Foodborne botulism* is caused by eating foods that contain the botulinum toxin. (15% incidence rate)¹
- *Wound botulism* is caused by toxin produced from a wound infected with *Clostridium botulinum*. (20% incidence rate)¹
- *Infant botulism* is caused by consuming the spores of the botulinum bacteria, which then grow in the intestines and release toxin. Most infant botulism cases cannot be prevented because the bacteria that causes this disease is in soil and dust. The bacteria can be found inside homes on floors, carpet, and countertops even after cleaning. (65% incidence rate)¹
- *Adult intestinal toxemia (adult intestinal colonization) botulism* is a very rare kind of botulism that occurs among adults by the same route as infant botulism.
- *Iatrogenic botulism* can occur from accidental overdose of botulinum toxin. (medical or cosmetic Botox procedures)
- Botulism cannot be passed from person to person.

Signs and symptoms

Symptoms of botulism are the same, regardless of how people get it. In foodborne botulism, symptoms generally begin 18 to 36 hours after eating a contaminated food, but they can occur as early as 6 hours or as late as 10 days.

Adults:

- double vision, blurred vision,
- drooping eyelids,
- slurred speech,
- difficulty swallowing, dry mouth, and
- muscle weakness.

Infants

- drowsy,
- feed poorly,
- become constipated, and
- have a weak cry and poor muscle tone.

These are all symptoms of the muscle paralysis caused by the toxin. Without treatment, people with botulism may go on to develop paralysis of the arms, legs, trunk, and the muscles used for breathing.

Diagnosis

- Diagnosis is made by clinical symptoms and laboratory confirmation.

Role of the School Nurse

Prevention

- Many cases of botulism are preventable but most cases of infant botulism cannot be prevented.
- If antitoxin is needed to treat a patient, it can be quickly delivered to a physician anywhere in the country.
- Public education about botulism prevention is an ongoing activity.
- Persons in state health departments and at CDC are knowledgeable about botulism and available to consult with physicians 24 hours a day.

Foodborne botulism

- Home-canned foods are a source of special concern. Foodborne botulism has often been from home-canned foods with low acid content, such as asparagus, green beans, beets and corn and is caused by failure to follow proper canning methods.
- Food-related botulism can be prevented through careful food-handling
- Persons who do home canning should follow strict hygienic procedures to reduce contamination of foods, and carefully follow instructions on safe home canning including the use of pressure canners/cookers as recommended through county extension services or from the US Department of Agriculture. Oils infused with garlic or herbs should be refrigerated. Cooperative Extension Offices in Maine website: <http://extension.umaine.edu/county-offices/>
- Honey can contain the bacteria that causes infant botulism so, children less than 12 months old should not be fed honey. Honey is safe for persons 1 year of age and older.

Wound botulism

- Seek prompt medical care for infected wounds and by not using injectable street drugs.

Exclusions – No exclusions apply to this condition as it is not passed from one person to another

Reporting Requirements- Suspect botulism should be reported immediately to 1-800-821-5821.

Resources

- American Academy of Pediatrics. Botulism and Infant Botulism. In: Pickering LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2012 Report of the Committee on Infectious Diseases*. 29th ed. Elk Grove Village, IL. American Academy of Pediatrics; 2012: 281-284.
- Heymann, David L., MD. *Control of Communicable Diseases Manual*. 19th ed. Washington, DC: American Public Health Association, 2008.
- CDC Website on Botulism: <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/botulism/>
- Infant Botulism Treatment and Prevention Program, Division of Communicable Disease Control, California Department of Public Health website: <http://www.infantbotulism.org/>
- University of Maine Cooperative Extension County Offices website: <http://extension.umaine.edu/county-offices/>
- USDA Home Canning Guide - http://www.uga.edu/nchfp/publications/publications_usda.html

Reference:

1. <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/botulism/>